

WHAT IS CLAIMED IS:

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Cont

1. A structure for mounting a stereo camera apparatus comprising:

5 a main camera taking photograph of an object in a shooting direction; and

10 a sub-camera taking photograph of said object from a point of view different from a point of view of said main camera, said main camera and sub-camera being disposed with a predetermined spacing in a direction substantially perpendicular to the shooting direction,

wherein optical axes of said main camera and said sub-camera are inclined toward the main camera side with respect to the shooting direction between said main camera and said sub-camera.

15 2. The structure for mounting the stereo camera apparatus as recited in claim 1, wherein angles of inclination of said main camera and said sub-camera are set to be such angles that make an area substantially left-right symmetric with respect to a central axis of a vehicle parallel to the shooting
20 direction, said area being an area of three-dimensional distance distribution obtained on the basis of images photographed by said cameras.

3. The structure for mounting the stereo camera

apparatus as recited in claim 1, wherein the optical axis of said sub-camera is inclined toward said sub-camera side with respect to the optical axis of said main camera.

5 4. The structure for mounting the stereo camera apparatus as recited in claim 2, wherein the optical axis of said sub-camera is inclined toward said sub-camera side with respect to the optical axis of said main camera.

10 5. The structure for mounting the stereo camera apparatus as recited in claim 1, further comprising:

a camera stay for mounting said cameras thereon, wherein a longitudinal direction of said camera stay is substantially perpendicular to the shooting direction.

15 6. The structure for mounting the stereo camera apparatus as recited in claim 1, wherein each of said cameras is made of CCD camera.

20 7. The structure for mounting the stereo camera apparatus as recited in claim 1, wherein said cameras are mounted in the vicinity of a rear-view mirror of a vehicle, said cameras taking photographs of views outside the vehicle.

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8. A structure for mounting a stereo camera apparatus which has a main camera and a sub-camera taking photograph of a common object in a shooting direction from different points of view and being disposed with a predetermined spacing in a baseline direction substantially perpendicular to the shooting direction, said stereo camera apparatus identifying a correlated destination of a first image photographed by said main camera within a second image photographed by said sub-camera and then calculating a parallax of said first image,

10 wherein optical axes of said main camera and said sub-camera are inclined toward said main camera side with respect to the shooting direction between said main camera and said sub-camera.

15 9. The structure for mounting the stereo camera apparatus as recited in claim 8, wherein an acute angle defined between said optical axis of said main camera and the baseline direction is smaller than an acute angle defined between said optical axis of said sub-camera and the baseline direction.

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